

AMENDMENTS TO THE CLAIMS

1. (Canceled)
2. (previously presented) A power steering pump in accordance with claim 11 wherein the flow control valve slides axially to vary the size to the inlet and to regulate fluid flow into the fluid bypass port.
3. (Canceled)
4. (previously presented) A power steering pump in accordance with claim 11 wherein the spring urges the flow control valve to open the inlet of the bypass port.
5. (previously presented) A power steering pump in accordance with claim 11 further comprising pumping elements disposed within the housing, said pumping elements comprising a cam chamber and a rotor having retractable vanes disposed within the cam chamber.
6. (Canceled)
7. (previously presented) A power steering pump in accordance with claim 12 further comprising:
pumping elements located within the housing and communicating with the fluid bypass port, for pumping fluid to the fluid discharge port, wherein the pumping elements comprise a cam chamber and a rotor having retractable vanes disposed within the cam chamber.
8. (previously presented) A power steering pump in accordance with claim 12 wherein the spring urges the flow control valve to open the inlet of the

bypass port.

9. (Canceled)

10. (previously presented) A power steering pump in accordance with claim 13 wherein the sleeve includes an end cap, and wherein plunger includes a rear end adjacent the end cap and a pressure equalization passage extending from the rear end and communicating through the hollow rod with the bore.

11. (currently amended) A power steering pump comprising:
a housing including a bore having an axis, a fluid discharge port communicating with the bore at a first axial location, a fluid bypass port communicating with the bore at a second axial location and including an inlet through which fluid enters the bypass port from the bore, and an fluid outlet passage communicating with the fluid discharge port and the bore;

a flow control valve located in the bore and axially displaceable along the axis for opening and closing the inlet;

~~a plunger secured to the valve and axially displaceable along the axis;~~

a spring including a first end and a second end axially opposite the first end, seated against axial displacement relative to the housing at the first end and seated against the plunger at the second end; and

an electromagnetic coil for actuating the plunger to move the flow control valve along the axis at the inlet; and

a plunger secured to the flow control valve and axially displaceable along the axis in response to the electromagnetic coil and a the spring, there being no differential hydraulic pressure across the plunger tending to displace the plunger axially.

12. (currently amended) A power steering pump comprising:
a housing including a bore having an axis, a fluid discharge port

communicating with the bore at a first axial location, a fluid bypass port communicating with the bore at a second axial location and including an inlet, through which fluid enters the bypass port from the bore, and an fluid outlet passage communicating with the fluid discharge port and the bore;

a flow control valve located in the bore and axially displaceable along the axis for opening and closing the inlet;

a spring including a first end and a second end axially opposite the first end, seated against axial displacement relative to the housing at the first end and seated against the actuator at the second end;

an electromagnetic coil for producing an electromagnetic field; and

a plunger for moving the flow control valve along the axis at the inlet, the plunger being secured to the flow control valve and axially displaceable along the axis in response to the electromagnetic field and a force produced by the spring, there being no differential hydraulic pressure across the plunger tending to displace the plunger axially.

13. (currently amended) A power steering pump comprising:

a housing including a bore having an axis, a fluid discharge port communicating with the bore at a first axial location, a fluid bypass port communicating with the bore at a second axial location and including an inlet, through which fluid enters the bypass port from the bore, and an fluid outlet passage communicating with the fluid discharge port and the bore;

a flow control valve located in the bore and axially displaceable along the axis to open the inlet, to close the inlet, and to adjust the size of the inlet through which flow can enter the bypass port from the bore;

~~a plunger secured to the valve and axially displaceable along the axis;~~

a spring including a first end and a second end axially opposite the first end, the first end resisted by the housing against axial displacement relative to the housing and seated against the plunger at the second end; and

an electromagnetic coil for producing an electromagnetic field tending to close

the inlet of the bypass port, the plunger being axially displaceable along the axis in response to the electromagnetic field and a force produced by the spring tending to open the inlet of the bypass port; and

a plunger for moving the flow control valve along the axis at the inlet in response to the electromagnetic field and a force produced by the spring, there being no differential hydraulic pressure across the plunger tending to displace the plunger axially.

14. (previously presented) The power steering pump of claim 13 further comprising pumping elements disposed within the housing, said pumping elements comprising a cam chamber and a rotor having retractable vanes disposed within the cam chamber.

15. (previously presented) The power steering pump of claim 13 further comprising:

a bracket secured to the housing and formed with an axial passage and a second bore, the spring contacting the sleeve;

a sleeve secured to the bracket, located in the second bore, and extending along the axis away from the housing; and

a hollow rod secured to the flow control valve, extending through the axial passage of the bracket into the sleeve, contacting the plunger, and providing an annular space between the sleeve and a radial outer surface of the rod, the spring being located in the annular space.

16. (previously presented) A power steering pump in accordance with claim 12 wherein the electromagnetic field urges the flow control valve to close the inlet of the bypass port, and the spring urges the flow control valve to open the inlet of the bypass port.